

Interactive comment on “Deformation of intrasalt competent layers in different modes of salt tectonics” by Mark G. Rowan et al.

Anonymous Referee #1

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This paper explores the role of lithological heterogeneities within ‘salt’ and explores their likely significance. The authors employ a variety of techniques including numerical and analogue modelling together with seismic analysis of salt structures. The authors suggest that competent layers in some settings such as diapirs may be underestimated due to breaking and boudinage of these layers. This is a very well-written and therefore easy to read paper. It should be read by all those who have even just a passing interest in ‘salt tectonics’ as it clearly explains the main concepts. Although some parts such as ‘drilling hazards’ seem a little out of place, it does provide a holistic view of the topic. Perhaps the only concerns are that the paper approaches the structural interpretation in terms of ‘contraction’ (folding etc.) or ‘extension’ (boudinage etc), and tends to ignore the potential variety of structures that may form in each of these settings via variations

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in the actual strain rates. Of course, this is a much more difficult factor to quantify over a given period of time, but it may make for interesting comparisons in different basins in future work. Overall, a well-written and great piece of work – a pleasure to read!

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